

Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	A square matrix $A = [a_{ij}]$ is lower triangular matrix when	A. $a_{ij} = 0$ for all $i \neq j$ B. $b_{ij} = 0$ C. $c_{ij} = 0$ D. $d_{ij} = 0$
2	If $S = \{3, 6, 9, 12, \dots\}$, then	A. $S =$ Four multiples of 3 B. $S =$ Set of even numbers C. $S =$ Set of prime numbers D. $S =$ All multiples of 3
3	If $x - 2$ is a factor of $ax^2 - 12x + a = 2a$, then $a =$ _____	A. -5 B. 5 C. 0 D. 1
4	Question Image <input style="width: 200px; height: 20px;" type="text"/>	A. 0 B. 1 D. undefined
5	The last term of $(1+2x)^{-2}$	A. $(-1) \cdot 2(2x)^{-2}$ B. $(-1) \cdot 4(2x)^{-2}$ C. $(-1) \cdot 3(2x)^{-3}$ D. Does not exist
6	$(\sqrt{3} + \sqrt{5}) + \sqrt{7} = \sqrt{3} + (\sqrt{5} + \sqrt{7})$ property used in above is	A. Commutative property of addition B. Closure property of addition C. Additive inverse D. Associative property w.r.t to addition
7	If the angle between two vectors \underline{u} and \underline{v} is 0 or π , then the vectors \underline{u} and \underline{v} are:	A. Orthogonal B. Collinear C. Perpendicular D. None of these
8	$\sqrt{23}$ is	A. A rational number B. A irrational number C. An even integer D. A factor of 36
9	Which of the following statement is true?	A. A set is a collection of non-empty object B. A set is a collection of only numbers C. a set is any collection of things D. a set is well-defined collection of objects
10	The expansion of $(1 + 2x)^{-2}$ is valid if	A. $ x < 1/2$ B. $ x < 1$ C. $ x < 2$ D. $ x < 3$
11	The sum of the cubes of three consecutive natural number is divisible by	A. 9 B. 6 C. 5 D. 10
12	Order (or sense) of an inequality is changed by multiplying or dividing its each side by a:	A. Zero B. one C. negative constant D. Non negative constant
13	$a > b \Rightarrow a + c > b + c$ is known as	A. Trichotomy property B. Additive property of inequality C. Transitive property D. Multiplicative property
14	If $Z = (1, 2)$, then $Z^{-1} = ?$	A. (0.2, 0.4) B. (-0.2, 0.4) C. (0.2, -0.4) D. (-0.2, -0.4)

A. x-axis

- 15 the curve of the parabola $y^2 = -4ax$ is symmetric with respect to
- B. y - axis
C. Both x and y- axis
D. None of these
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- 16 The expansion of $(1 - 3x)^{-1}$ is valid if
- A. $|x| < 1$
B. $|x| < 3$
C. $|x| < 1/3$
D. None of these
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- 17 A square matrix $A = [a_{ij}]$ is lower triangular matrix when:
- A. $a_{ij} = 0$ for all $i < j$
B. $b_{ij} = 0$
C. $c_{ij} = 0$
D. $d_{ij} = 0$
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- 18 The set of complex numbers forms a group under the binary operation of
- A. Addition
B. Multiplication
C. Division
D. Subtraction
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- 19 
- A. 2
B. 4
C. 3
D. 16
-
- 20 
- A. $a \cot(ax + b) + c$
B. $-a \cot(ax + b) + c$